

	English/Language Arts	Mathematics	Social Studies
ACTIVITY			
Adventures In Density (25)	3.2.2		
H ₂ O Olympics (30)		3.1.1	
Aqua Bodies (63)		3.1.11	
Salt Marsh Players (99)	3.5.2		
Water Address (122)	3.1.3		
Capture, Store, And Release (133)			3.3.3, 3.3.5
Imagine (157)	3.5.1, 3.7.2		
The Incredible Journey (161)	3.5.1		
Old Water (171)		3.5.12	3.3.4, 3.3.5
Piece It Together (174)	3.1.3		3.3.3, 3.3.4, 3.3.5
Poetic Precipitation (182)	3.5.2		
Rainy Day Hike (186)			3.3.6
The Thunderstorm (196)	3.5.1		
Wet Vacation (206)	3.4.4, 3.5.5		3.3.4
Common Water (232)	3.7.2		3.4.4
A Drop In The Bucket (238)		3.5.6	3.3.2
Irrigation Interpretation (254)			3.3.1, 3.3.3, 3.3.5
The Long Haul (260)		3.5.6, 3.5.9	3.1.4
Sum of The Parts (267)	3.7.8, 3.7.12		
Water Meter (271)		3.3.7, 3.5.6	

WaterWorks (274)			3.4.1
AfterMath (289)	3.4.1, 3.5.2, 3.7.5, 3.7.8, 3.7.12	3.1.14, 3.6.1	3.3.5, 3.3.7, 3.4.8
Back To the Future (293)			3.3.3
Every Drop Counts (307)		3.3.7	
Macroinvertebrate Mayhem (322)	3.4.4, 3.5.2		
Money Down The Drain (328)		3.1.14, 3.3.2, 3.5.5, 3.6.7	
Cold Cash In the Icebox (373)		3.5.6	
Pass The Jug (392)			3.3.3, 3.3.7
Water Bill Of Rights (403)	3.5.2, 3.5.5		
Water Concentration (407)	3.2.2, 3.3.4		3.1.4
Water Crossing (421)	3.2.5, 3.2.6, 3.3.4, 3.5.1		3.3.1
Raining Cats And Dogs (435)	3.3.1		
Water Write (457)	3.4.1, 3.5.5		

Grade 3

Standard 1

READING: Word Recognition, Fluency, and Vocabulary Development

Students understand the basic features of words. They select letter patterns and know how to translate them into spoken language using phonics (an understanding of the different letters that make different sounds), syllables, word parts (un-, -ful), and context clues (the meaning of the text around a word).

They apply this knowledge to achieve fluent (smooth and clear) oral and silent reading.

Decoding and Word Recognition

- 3.1.3 Read aloud grade-level-appropriate narrative text (stories) and expository text (information) fluently and accurately and with appropriate timing, change in voice, and expression.

WET Activities (page): 122, 174

Standard 2

READING: Comprehension

*Students read and understand grade-level-appropriate material. They use a variety of comprehension strategies, such as asking and responding to essential questions, making predictions, and comparing information from several sources to understand what is read. The selections in the **Indiana Reading List** (available online at www.doe.state.in.us/standards/readinglist.html) illustrate the quality and complexity of the materials to be read by students. In addition to their regular school reading, at Grade 3, students read a variety of grade-level-appropriate narrative (story) and expository (informational and technical) texts, including classic and contemporary literature, poetry, children's magazines and newspapers, reference materials, and online information.*

Comprehension and Analysis of Grade-Level-Appropriate Text

- 3.2.2 Ask questions and support answers by connecting prior knowledge with literal information from the text.
Example: When reading informational materials about science topics or social science subjects, compare what is read to background knowledge about the subject.

WET Activities (page): 25, 407

- 3.2.5 Distinguish the main idea and supporting details in expository (informational) text.
Example: Read an informational text, such as *The Magic School Bus: Inside the Earth* by Joanna Cole or *Volcano* by Christopher Lampton, and make a chart listing the main ideas from the text and the details that support them.

WET Activities (page): 421

- 3.2.6 Locate appropriate and significant information from the text, including problems and solutions.
Example: Identify the problem faced by a character in a book, such as *A Gift for Tia Rosa* by Karen T. Taha, and explain how the character solved his or her problem. Identify how problems can form the motivations for new discoveries or inventions by reading

informational texts about famous inventors, scientists, or explorers, such as Thomas Edison or Jonas Salk.

WET Activities (page): 421

Standard 3

READING: Literary Response and Analysis

*Students read and respond to a wide variety of significant works of children’s literature. They identify and discuss the characters, theme (the main idea of a story), plot (what happens in a story), and the setting (where a story takes place) of stories that they read. The selections in the **Indiana Reading List** (available online at www.doe.state.in.us/standards/readinglist.html) illustrate the quality and complexity of the materials to be read by students.*

Structural Features of Literature

- 3.3.1 Recognize different common genres (types) of literature, such as poetry, drama, fiction, and nonfiction.
Example: Look at the same topic, such as cranes, and see how it is shown differently in various forms of literature, such as the poem “On the Run” by Douglas Florian, the play *The Crane Wife* by Sumiko Yagawa, Anne Laurin’s fictional book *Perfect Crane*, and the nonfiction counting book *Counting Cranes* by Mary Beth Owens.

WET Activities (page): 435

Narrative Analysis of Grade-Level-Appropriate Text

- 3.3.4 Determine the theme or author’s message in fiction and nonfiction text.
Example: Look at the admirable qualities in Abraham Lincoln as shown in both the fictional story, *More than Halfway There* by Janet Halliday Ervin, and the nonfiction biography, *Abe Lincoln’s Hat* by Martha Brenner.

WET Activities (page): 407, 421

Standard 4

WRITING: Process

Students find and discuss ideas for writing and keep a list of writing ideas. Students write clear sentences and paragraphs that develop a central idea. Students progress through the stages of the writing process, including prewriting, drafting, revising, and editing multiple drafts.

Organization and Focus

- 3.4.1 Find ideas for writing stories and descriptions in conversations with others; in books, magazines, or school textbooks; or on the Internet.

WET Activities (page): 289, 457

Research and Technology

- 3.4.4 Use various reference materials (such as a dictionary, thesaurus, atlas, encyclopedia, and online resources).

WET Activities (page): 206, 322

Standard 5

WRITING: Applications (Different Types of Writing and Their Characteristics)

At Grade 3, students continue to write compositions that describe and explain familiar objects, events, and experiences. Students write both informal and formal letters. Student writing demonstrates a command of Standard English and the drafting, research, and organizational strategies outlined in Standard 4 — Writing Process. Writing demonstrates an awareness of the audience (intended reader) and purpose for writing.

In addition to producing the different writing forms introduced in earlier grades, Grade 3 students use the writing strategies outlined in Standard 4 — Writing Process to:

- 3.5.1 Write narratives (stories) that:

provide a context within which an action takes place.

include details to develop the plot.

Example: Write a story based on an article in a magazine, such as *Cricket* or *Stone Soup*, about what life was like 100 years ago.

WET Activities (page): 157, 161, 196, 421

- 3.5.2 Write descriptive pieces about people, places, things, or experiences that:

develop a unified main idea.

use details to support the main idea.

Example: Write a description for how to make a model boat. Include clear enough directions so that a classmate can make the model. Write a description of a favorite place using clear details so that the reader can picture the place and understand why it is a favorite place.

WET Activities (page): 99, 182, 289, 322, 403

- 3.5.5 Write for different purposes and to a specific audience or person.

Example: Write an article about the library at your school. Include a list of ways that students use the library.

WET Activities (page): 206, 403, 457

Standard 7

LISTENING AND SPEAKING: Skills, Strategies, and Applications

Students listen critically and respond appropriately to oral communication. They speak in a manner that guides the listener to understand important ideas by using proper phrasing, pitch, and modulation (raising and lowering voice). Students deliver brief oral presentations about familiar experiences or interests that are organized around a coherent thesis statement (a statement of topic). Students use the same Standard English conventions for oral speech that they use in their writing.

Comprehension

3.7.2 Connect and relate experiences and ideas to those of a speaker.

WET Activities (page): 157, 232

Organization and Delivery of Oral Communication

3.7.5 Organize ideas chronologically (in the order that they happened) or around major points of information.

WET Activities (page): 289

3.7.8 Clarify and enhance oral presentations through the use of appropriate props, including objects, pictures, and charts.

WET Activities (page): 267, 289

Speaking Applications

3.7.12 Make brief narrative (story) presentations that:
provide a context for an event that is the subject of the presentation.
provide insight into why the selected event should be of interest to the audience.
include well-chosen details to develop characters, setting, and plot.

WET Activities (page): 267, 289

Grade 3

In this technological age, mathematics is more important than ever. When students leave school, they are more and more likely to use mathematics in their work and everyday lives — operating computer equipment, planning timelines and schedules, reading and interpreting data, comparing prices, managing personal finances, and completing other problem-solving tasks. What they learn in mathematics and how they learn it will provide an excellent preparation for a challenging and ever-changing future.

The state of Indiana has established the following mathematics standards to make clear to teachers, students, and parents what knowledge, understanding, and skills students should acquire in Grade 3:

Standard 1 — Number Sense

Understanding the number system is the basis of mathematics. Students extend their understanding of the place value system to count, read, and write numbers up to 1,000. They learn to order and round numbers up to 1,000. They develop the concept of equivalent fractions — fractions that look different, but have the same value — and use their understanding of equivalent fractions to compare the sizes of fractions. They also begin to develop the concept of decimals as a different way of representing fractional numbers.

Standard 3 — Algebra and Functions

Algebra is a language of patterns, rules, and symbols. Students at this level represent relationships with numeric equations and use those equations to solve problems. They continue number patterns involving multiplication and use some of the rules for multiplication to check results. They begin to develop the concept of a function and the relationship between numbers and number lines.

Standard 5 — Measurement

The study of measurement is essential because of its uses in many aspects of everyday life. Students measure length to the nearest half-inch, add units of length, and find the perimeters of shapes. They estimate area and volume in preparation for developing formulas for calculating them. They estimate, measure, and compare weights, capacities, and temperatures in standard units. They also learn about money: the value of any collection of coins and dollars, writing money using the \$ symbol, and deciding whether they have enough money to make a purchase.

Standard 6 — Problem Solving

In a general sense, mathematics is problem solving. In all mathematics, students use problem-solving skills: they choose how to approach a problem, they explain their reasoning, and they check their results. As they develop their skills with numbers, geometry, or measurement, for example, students move from simple ideas to more complex ones by taking logical steps that build a better understanding of mathematics.

As part of their instruction and assessment, students should also develop the following learning skills by Grade 12 that are woven throughout the mathematics standards:

Communication

The ability to read, write, listen, ask questions, think, and communicate about math will develop and deepen students' understanding of mathematical concepts. Students should read text, data, tables, and graphs with comprehension and understanding. Their writing should be detailed and coherent, and they

should use correct mathematical vocabulary. Students should write to explain answers, justify mathematical reasoning, and describe problem-solving strategies.

Reasoning and Proof

Mathematics is developed by using known ideas and concepts to develop others. Repeated addition becomes multiplication. Multiplication of numbers less than ten can be extended to numbers less than one hundred and then to the entire number system. Knowing how to find the area of a right triangle extends to all right triangles. Extending patterns, finding even numbers, developing formulas, and proving the Pythagorean Theorem are all examples of mathematical reasoning. Students should learn to observe, generalize, make assumptions from known information, and test their assumptions.

Representation

The language of mathematics is expressed in words, symbols, formulas, equations, graphs, and data displays. The concept of one-fourth may be described as a quarter, $\frac{1}{4}$, one divided by four, 0.25, $\frac{1}{8} + \frac{1}{8}$, 25 percent, or an appropriately shaded portion of a pie graph. Higher-level mathematics involves the use of more powerful representations: exponents, logarithms, π , unknowns, statistical representation, algebraic and geometric expressions. Mathematical operations are expressed as representations: +, =, divide, square. Representations are dynamic tools for solving problems and communicating and expressing mathematical ideas and concepts.

Connections

Connecting mathematical concepts includes linking new ideas to related ideas learned previously, helping students to see mathematics as a unified body of knowledge whose concepts build upon each other. Major emphasis should be given to ideas and concepts across mathematical content areas that help students see that mathematics is a web of closely connected ideas (algebra, geometry, the entire number system). Mathematics is also the common language of many other disciplines (science, technology, finance, social science, geography) and students should learn mathematical concepts used in those disciplines. Finally, students should connect their mathematical learning to appropriate real-world contexts.

Standard 1

Number Sense

Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.*

- 3.1.1 Count, read, and write whole numbers up to 1,000.
Example: Write 349 for the number “three hundred forty-nine”.

WET Activities (page): 30

- 3.1.11 Given a set* of objects or a picture, name and write a decimal to represent tenths and hundredths.
Example: You have a pile of 100 beans and 72 of them are lima beans. Write the decimal that represents lima beans as a part of the whole pile of beans.

WET Activities (page): 63

- 3.1.14 Identify whether everyday events are certain, likely, unlikely, or impossible.
Example: It is raining in your neighborhood. Is it certain, likely, unlikely, or impossible that the tree in your front yard will get wet?

WET Activities (page): 289, 328

Standard 3 **Algebra and Functions**

Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.

- 3.3.1 Represent relationships of quantities in the form of a numeric expression or equation.
Example: Bill's mother gave him money to buy three drinks that cost 45 cents each at the concession stand. When he returned to the bleachers, he gave 25 cents change to his mother. Write an equation to find the amount of money Bill's mother originally gave him.

WET Activities (page): 328

- 3.3.7 Plot and label whole numbers on a number line up to 10.
Example: Mark the position of 7 on a number line up to 10.
- * commutative property: the order when adding or multiplying numbers makes no difference (e.g., $5 + 3 = 3 + 5$), but note that this rule is not true for subtraction or division
 - * associative property: the grouping when adding or multiplying numbers makes no difference (e.g., in $5 + 3 + 2$, adding 5 and 3 and then adding 2 is the same as 5 added to $3 + 2$), but note that this rule is not true for subtraction or division

WET Activities (page): 271, 307

Standard 5 **Measurement**

Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.

- 3.5.5 Estimate or find the volume of objects by counting the number of cubes that would fill them.
Example: How many of these cubes will fill the box?

WET Activities (page): 328

- 3.5.6 Estimate and measure capacity using quarts, gallons, and liters.
Example: This bottle holds one liter. Estimate how many liters the sink holds.

WET Activities (page): 238, 260, 271, 373

- 3.5.9 Tell time to the nearest minute and find how much time has elapsed.
Example: You start a project at 9:10 a.m. and finish the project at 9:42 a.m. How much time has passed?

WET Activities (page): 260

- 3.5.12 Carry out simple unit conversions within a measurement system (e.g., centimeters to meters, hours to minutes).
Example: How many minutes are in 3 hours?
- * polygon: a two-dimensional shape with straight sides (e.g., triangle, rectangle, pentagon)

WET Activities (page): 172

Standard 6

Problem Solving

Students make decisions about how to approach problems and communicate their ideas.

- 3.6.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.
Example: Solve the problem: “Start with any number. If it is even, halve it. If it is odd, add 1. Do the same with the result and keep doing that. Find what happens by trying different numbers.” Try two or three numbers and look for patterns.

WET Activities (page): 289

- 3.6.7 Make precise calculations and check the validity of the results in the context of the problem.
Example: In the first example, notice that the result of adding 1 to an odd number is always even. Use this to check your calculations.

WET Activities (page): 328

GRADE 3

The Local Community and Communities Around the World

In Grade 3, students study continuity and change in their local community and in communities in other states and regions of the world. They also learn how people have created and shaped their communities over time, the roles of citizens and functions of government in the community, state, and nation, and how people in communities interact with their environment, develop and use technology, and use human and natural resources.

The Indiana's K – 8 academic standards for social studies are organized around five content areas. The content area standards and the types of learning experiences they provide to students in Grade 3 are described below. On the pages that follow, age-appropriate concepts are listed underneath each standard. Skills for thinking, inquiry, and participation in a democratic society are integrated throughout. Specific terms are defined and examples are provided when necessary.

Standard 1 — History

Students will describe how significant people, events, and developments have shaped their own community and region; compare their community to other communities and regions in other times and places; and use a variety of resources to gather information about the past.

Standard 3 — Geography

Students will explain that latitude and longitude are used to locate places on maps and globes, and begin to understand Earth/sun relationships, identify the distinctive physical and cultural features of their community, and explain the geographic relationships of their own community with the state, nation, and world.

Standard 4 — Economics

Students will explain how people in the local community make choices about using goods, services, and productive resources, how they engage in trade to satisfy their economic wants, how they use a variety of sources to gather and apply information about economic changes in the community, and how they compare costs and benefits in economic decision making.

Standard 1

History

Students will describe how significant people, events, and developments have shaped their own community and region; compare their community to other communities and regions in other times and places; and use a variety of resources to gather information about the past.

Historical Knowledge

- 3.1.4 Give examples of people, events, and developments that brought important changes to the local community or region.
Example: Developments in transportation, such as the building of canals, roads, and railroads connected communities and caused changes in population or industry.

WET Activities (page): 260, 407

Standard 3

Geography

Students will explain that latitude and longitude are used to locate places on maps and globes, and begin to understand Earth/sun relationships, identify the distinctive physical and cultural features of their community, and explain the geographic relationships of their own community with the state, nation, and world.

The World in Spatial Terms

- 3.3.1 Distinguish between physical and political features on maps and globes and label a map of North America identifying countries, oceans, major rivers, the Great Lakes, and mountain ranges. Locate the United States, Indiana, and the local community.

WET Activities (page): 254, 421

- 3.3.2 Identify the continents and oceans, the equator, the Northern and Southern hemispheres, and the Eastern and Western hemispheres.

WET Activities (page): 238

Places and Regions

- 3.3.3 Explain that regions are areas that have similar physical and cultural characteristics* and locate the local community in a specific region.
Example: States touching the Great Lakes are part of the Great Lakes Region. The same states are also considered part of the “Lower Midwest” because of their location relative to other states.

WET Activities (page): 133, 174, 254, 293, 392

- 3.3.4 Explain basic Earth/sun relationships*, including how they influence climate, and identify major climate regions* of the United States.

- * cultural characteristics: human features, such as population characteristics, communication and transportation networks, religion and customs, and how people make a living or build homes and other structures
- * Earth/sun relationships: the rotation and tilt of Earth on its axis and the revolution of Earth around the sun influence climate variation on Earth; Indiana has major seasonal differences in climate relating to changes in the position of the sun and the amount of sunlight received
- * regions: areas that have common characteristics. Some regions have finite or absolute boundaries, such as political units like a country, state, or school district. Some regions have blurred boundaries, such as crop or climate regions or a region based on primary language. Regions also can be entirely perceptual. An example is the “Midwest,” where boundaries vary widely according to people’s perception.

WET Activities (page): 171, 174, 206

Physical Systems

- 3.3.5 Explain how climate affects the vegetation and animal life of a region and describe the physical characteristics that relate to form an ecosystem*.

- * ecosystem: a group of organisms in an area that interact with one another, together with their nonliving environment

WET Activities (page): 133, 171, 174, 254, 289

Human Systems

- 3.3.6 Construct maps and graphs that show aspects of human/environment interaction in the local community.

Example: Patterns of rural, urban, and suburban development.

WET Activities (page): 186

Environment and Society

- 3.3.7 Use a variety of information resources* to identify local environmental issues and examine the ways that people have tried to solve these problems.

Example: Research how the community gets its water today compared with how early settlers got their water.

- * information resources: print media, such as books, magazines, and newspapers; electronic media, such as radio, television, Web sites, and databases; and community resources, such as individuals and organizations

WET Activities (page): 189, 392

Standard 4

Economics

Students will explain how people in the local community make choices about using goods, services, and productive resources; how they engage in trade to satisfy their economic wants; how they use a variety of sources to gather and apply information about economic changes in the community; and how they compare costs and benefits in economic decision making.

- 3.4.1 Give examples from the local community that illustrate the scarcity* of productive resources*.

Explain how this scarcity requires people to make choices and incur opportunity costs*.

WET Activities (page): 274

- 3.4.4 Define interdependence* and give examples of how people in the local community depend on each other for goods and services.

WET Activities (page): 232

- 3.4.8 Illustrate how people compare benefits and costs when making choices and decisions as consumers and producers.

Example: When a family is deciding whether to buy a car, they have to compare the benefit of having personal transportation with the cost of buying and maintaining the car.

WET Activities (page): 289